AMENDMENTS TO THE CLAIMS

1-28. (Canceled)

29. (Currently Amended) A communication apparatus for data communication with at least one terminal, and for controlling a communication timing by detecting transmission characteristics, which vary periodically at a predetermined frequency according to an AC power supply having a positive going current and a negative going current relative to a zero-crossing point of said AC power supply, in a transmission path to the terminal, said communication apparatus comprising:

a receiver operable to receive a plurality of packets from the terminal at a plurality of transmission timings of packets within one cycle of said predetermined frequency of said AC power supply, and to generate information regarding a receiving condition of the received packets through said transmission path affected by said AC power supply;

a detector operable to detect, based on said information regarding the receiving condition of the received packets from the terminal, an interval at which an error rate is higher than a specified threshold within said one cycle of said predetermined frequency of said AC power supply, said interval representing a transmission path fluctuation period in which the transmission path is affected by said AC power supply; and

a transmission controller operable to stop data transmission during said detected interval at which the error rate is higher than the specified threshold within said one cycle of said predetermined frequency of said AC power supply.

30. (Previously Presented) The communication apparatus as described in claim 29,

wherein said receiver is operable to detect, for each of said received packets, whether or not an error exists, and to generate an error signal upon detection of each error, and

wherein said detector detects an error rate distribution to detect the interval at which the error rate is higher than the specified threshold.

31. (Previously Presented) The communication apparatus as described in claim 30, further comprising:

a periodic signal generator operable to generate a periodic signal at said predetermined frequency,

wherein said receiver is operable to receive a plurality of packets transmitted from the terminal during a plurality of cycles of said predetermined frequency, and

wherein said detector detects a phase of each of the error signals relative to said periodic signal, and detects the error rate distribution by counting the number of errors at various phases during the plurality of cycles of said predetermined frequency.

32. (Previously Presented) The communication apparatus as described in claim 31, wherein said periodic signal generator detects an AC power source voltage or current and generates said periodic signal based on the detected AC voltage or AC current.

33. (Previously Presented) The communication apparatus as described in claim 29,

wherein said receiver generates, upon receipt of packets from the terminal, transmission path information based on the received packets, and

wherein said detector detects the interval at which the error rate is higher than the specified threshold based on said transmission path information.

34. (Currently Amended) A communication method for data communication with at least one terminal, and for controlling a communication timing by detecting transmission characteristics, which vary periodically at a predetermined frequency according to an AC power supply having a positive going current and a negative going current relative to a zero-crossing point of said AC power supply, in a transmission path to the terminal, said communication method comprising:

receiving a plurality of packets from the terminal at a plurality of transmission timings of packets within one cycle of said predetermined frequency of said AC power supply;

generating information regarding a receiving condition of the received packets through said transmission path affected by said AC power supply;

detecting, based on the information regarding the receiving condition of the received packets from the terminal, an interval at which an error rate is higher than a specified threshold within said one cycle of said predetermined frequency of said AC power supply, said interval representing a transmission path fluctuation period in which the transmission path is affected by said AC power supply; and

stopping data transmission during said detected interval at which the error rate is higher than the specified threshold within said one cycle of said predetermined frequency of said AC power supply.

35. (New) The communication apparatus as described in claim 29, wherein said AC power supply is a commercial AC power supply.

36. (New) The communication method as described in claim 34, wherein said AC power supply is a commercial AC power supply.